

IN THE SPECIFICATION

Please replace the Abstract with the substitute Abstract appended to this response on a separate page.

Please replace the section "Summary of the Invention" on pages 4-12 of the specification with the attached replacement section.

SUMMARY OF THE INVENTION

It is a general object of the present invention to provide food or food products or their processing method for not only foods with processed products of one or more of wheat, barley, oats and rye or non-processed wheat, barley, oats and rye but also foods with usual raw material of grains, in which functional ingredients content like GABA or other free amino acids in foods is increased by controlling any part of their manufacturing process.

Embodiments 1 through 16 correspond to and incorporate the subject matter of the corresponding original claims.

In order to achieve the above-mentioned object, as described in claim embodiment 1, there is provided a food or food products using grains as materials, characterized in that functional ingredients contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

According to claim embodiment 1, for food or food products using grains as usual materials, for example, without adding amino acids as additives, functional ingredients (like GABA or free amino acids) contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

Additionally, in the food or food products as claimed in claim 1, one of wheat, barley, and soba as said grains is the material.

According to claim embodiment 2, for food or food products including wheat, barley, or soba as grains, for example, without adding amino acids as additives, functional ingredients (like GABA or free amino acids) contents can be increased.

In order to achieve the above-mentioned object, as described in claim embodiment 3, there is provided a food or food products using one or more of wheat, barley, oats and rye, or processed products of one or more of wheat, barley, oats and rye,

characterized in that functional ingredients contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

According to claim embodiment 3, for a food or food products including processed products of one or more of wheat, barley, oats and rye (for example, barley malt), without adding amino acids as additives, functional ingredients (like GABA or free amino acids) contents can be increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

Additionally, as for the food or food products as claimed in any one of claim embodiments 1-3, said food or foods products are one of bread, pasta, udon and soba.

According to claim embodiment 4, for foods like bread, pasta, udon and soba, for example, without adding amino acids as additives, functional ingredients (like GABA or free amino acids) contents can be increased.

Additionally, in the food or foods products as claimed in any one of claims embodiments 1-4, the manufacturing process is a kneading process.

According to claim embodiment 5, during the kneading process, functional ingredients (like GABA or free amino acids) contents can be increased. For not only food using usual materials of grains but also food including the processed product of one or more of wheat, barley, oats and rye (for example, barley malt), without adding amino acids as additives, a food or food products, in which functional ingredients (like GABA or free amino acids) contents is increased and the kneading process is included in the manufacturing process of the food or food products like breads.

Additionally, in the food or foods products as claimed in any one of claims embodiments 1-4, the manufacturing process is a fermentation process.

According to claim embodiment 6, during the fermentation process, functional ingredients (like GABA or free amino acids) contents can be increased. For not only food using usual materials of grains but also food including the processed product of one or more of wheat, barley, oats and rye (for example, barley malt), without adding amino acids as additives, a food or food products, in which functional ingredients (like GABA or free amino acids) contents is increased and the fermentation process is included in the manufacturing process of the food or food products like breads.

Additionally, in the food or foods products as claimed in any one of claims embodiments 1-4, the manufacturing process is an aging process.

According to claim embodiment 7, during the aging process, functional ingredients (like GABA or free amino acids) contents can be increased. For not only food using usual materials of grains but also food including the processed product of one or more of wheat,

barley, oats and rye (for example, barley malt), without adding amino acids as additives, a food or food products, in which functional ingredients (like GABA or free amino acids) contents are increased and the aging process is included in the manufacturing process of the food or food products like breads.

Additionally, in the food or foods products as claimed in any one of ~~claims~~ embodiments 3-7, wherein said processed products of the one or more of wheat, barley, oats and rye is soaked seeds of the one or more of wheat, barley, oats and rye in water or hot water, a germinated seed of the one or more of wheat, barley, oats and rye depending on germination time, or malt, in which malt seed of the one or more of wheat, barley, oats and rye are soaked in water or hot water to be germinated, then a drying process or a roast-dry process is performed.

According to claim embodiment 8, by using the soaked seeds of the one or more of wheat, barley, oats and rye in water or hot water, a germinated seed of the one or more of wheat, barley, oats and rye depending on germination time, or malt, in which malt seed of the one or more of wheat, barley, oats and rye are soaked in water or hot water to be germinated is produced, then a drying process or a roast-dry process is performed, without adding amino acids as additives, so that functional ingredients (like GABA or free amino acids) contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

In order to achieve the above-mentioned object, as described in ~~claim~~ embodiment 9, there is provided a method of processing of food or food products using grains as materials, characterized in that functional ingredients contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

According to claim embodiment 9, for example, without adding amino acids as additives, functional ingredients (like GABA or free amino acids) contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

In order to achieve the above-mentioned object, as described in ~~claim~~ embodiment 10, there is provided a method of processing a food or food products using one or more of wheat, barley, oats and rye, or processed products of the one or more of wheat, barley, oats and rye,

characterized in that functional ingredients contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products.

According to claim embodiment 10, without adding amino acids as additives, a method of processing of a food or food products including processed products using one or more of wheat, barley, oats and rye (like barley malt), in which functional ingredients (like GABA or free amino acids) contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products, can be provided.

Additionally, in the method of processing of the food or foods products as claimed in claims embodiments 9 or 10, the manufacturing process is a kneading process.

According to claim embodiment 11, during the kneading process, functional ingredients (like GABA or free amino acids) contents can be increased. That is, for not only food using usual materials of grains but also food including the processed product of one or more of wheat, barley, oats and rye (for example, barley malt), without adding amino acids as additives, a food or food products, in which functional ingredients (like GABA or free amino acids) contents are increased.

Additionally, in the method of processing the food or food products ~~as claimed~~ in claim embodiment 9 or 10, the manufacturing process is a fermentation process.

According to claim embodiment 12, during the fermentation process, functional ingredients (like GABA or free amino acids) contents can be increased. That is, for not only food using usual materials of grains but also food including the processed product of one or more of wheat, barley, oats and rye (for example, barley malt), without adding amino acids as additives, a food or food products, functional ingredients (like GABA or free amino acids) contents are increased.

Additionally, in the method of processing the food or food products ~~as claimed~~ in claim embodiment 9 or 10, the manufacturing process is an aging process.

According to claim embodiment 13, during the aging process, functional ingredients (like GABA or free amino acids) contents can be increased. That is, for not only food using usual materials of grains but also food including the processed product of one or more of wheat, barley, oats and rye (for example, barley malt), without adding amino acids as additives, a food or food products, functional ingredients (like GABA or free amino acids) contents are increased.

Additionally, in the method of processing of the food or foods products as claimed in any one of claim embodiment 10-13, wherein said processed products of one or more of wheat, barley, oats and rye is a soaked seeds of the one or more of wheat, barley, oats and rye in water or hot water, a germinated seed of the one or more of wheat, barley, oats and rye depending on germination time, or malt, in which seed of the one or more of wheat, barley, oats and rye are soaked in water or hot water to be germinated, then a dry process or a roast-dry process is performed.

According to claim embodiment 14, by using any one of the seeds of the one or more of wheat, barley, oats and rye soaked in water or hot water, a germinated seed of the one or more of wheat, barley, oats and rye depending on germination time, or malt, in which malt seed of the one or more of wheat, barley, oats and rye are soaked in water or hot water to be germinated, then a drying process or a roast-dry process is performed, without adding amino acids as additives, the method of processing of food, in which functional ingredients (like GABA or free amino acids) contents are increased by controlling manufacturing conditions in at least one step during a manufacturing process of the food or food products, can be provided.

In order to achieve the above-mentioned object, as described in claim embodiment 15, there is provided a method of processing a food or food products,

characterized in that said food or food product is one of bread, pasta, udon and soba.

According to claim embodiment 15, without adding amino acids as additives, a method of processing one of bread, pasta, udon and soba, in which functional ingredients (like GABA or free amino acids) contents are increased, can be provided.

In order to achieve the above-mentioned object, as described in claim embodiment 16, there is provided a fried food or food products using one or more of wheat, barley, oats and rye or flour of processed products of the one or more of wheat, barley, oats and rye,

characterized in that said flour of processed products of the one or more of wheat, barley, oats and rye is a seed of the one or more of wheat, barley, oats and rye soaked in water or hot water, a germinated seed of the one or more of wheat, barley, oats and rye depending on germination time, or malt, in which malt seed of the one or more of wheat, barley, oats and rye are soaked in water or hot water to be germinated, then a drying process or a roast-dry process is performed.

According to claim embodiment 16, by adding any one of the seeds of the one or more of wheat, barley, oats and rye soaked in water or hot water, a germinated seed of the

one or more of wheat, barley, oats and rye depending on germination time, or malt, in which malt a seed of the one or more of wheat, barley, oats and rye is soaked in water or hot water to be germinated, then a drying process or a roast-dry process is performed to 50% fried, fried food, in which is included lots of GABA and other free amino acids, so that a feeling of appetite that the fried food is soft due to the protease activity in the processed product of one or more of wheat, barley, oats and rye, can be provided. Also, in a manufacturing process of edible covering of fried foods, functional ingredients contents in the edible covering can be adjusted by controlling manufacturing conditions.

As mentioned above, it is possible to provide food or food products and their processing methods, in which any functional ingredient content is increased by controlling the temperature condition during at least one step of their manufacturing processes with using processed products of one or more of wheat, barley, oats and rye (like malt) as food raw materials. Also, it is possible to provide food or food products and their processing methods, in which functional ingredients contents are increased by controlling manufacturing conditions of foods added with non-processed wheat, barley, oats and rye but without processed products of one or more of wheat, barley, oats and rye, or foods with usual raw material of grains.

Other objects, features and advantages of the present invention will become more apparent from the following detailed description.